

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. – 6. (Cancelled)

7. (Currently Amended) A network interface for processing an incoming message sent by a client device to a server, comprising:

a First-In-First-Out (FIFO) buffer adapted to receive the incoming message and to assemble the incoming message from a serial to a parallel form;

a regular-expression pattern matching circuit connected to the FIFO buffer, the regular-expression pattern matching circuit adapted to, concurrent with the assembly of the incoming message from a serial to a parallel form, recognize a Hypertext Transfer Protocol (HTTP) message header embedded in the incoming message, parse the recognized HTTP message header into a parsed HTTP message header, provide the parsed HTTP message header in a compact form to a CPU and memory in the server, and provide to the CPU and memory in the server the incoming message that cannot be recognized by the regular-expression pattern matching circuit, wherein:

the HTTP message header includes a HTTP cookie, and

the regular-expression pattern matching circuit is implemented by a technique selected from the group consisting of hardware, software, and a combination thereof; and

a logic circuit connected to the FIFO buffer, the logic circuit adapted to provide a response message to the client device based on a content of the recognized HTTP message header.

8. – 12. (Cancelled)

13. (Currently Amended) A server for providing services to a client device,
comprising:
a central processing unit (CPU);
a bus connected to the CPU;
a memory connected to the bus, the memory having a server application program stored
therein; and
a network interface for processing ~~an incoming messages~~ message sent by the client
device to the server, the network interface including:
a First-In-First-Out (FIFO) buffer adapted to receive the incoming ~~messages~~
message and to assemble the incoming ~~messages~~ message from a serial to a parallel form,
a regular-expression pattern matching circuit connected to the FIFO buffer, the
regular-expression pattern matching circuit adapted to, concurrent with the assembly of the
incoming ~~messages~~ message from a serial to a parallel form, recognize a Hypertext Transfer
Protocol (HTTP) message ~~headers~~ header embedded in the incoming ~~messages~~ message, parse
the recognized HTTP message headers header into a parsed HTTP message ~~headers~~ header,
provide the parsed HTTP message ~~headers~~ header in a compact form to the CPU and the
memory, and provide to the CPU and the memory any incoming ~~messages~~ message that cannot
be recognized by the regular-expression pattern matching circuit, wherein:
the HTTP message ~~headers~~ include header ~~includes~~ an HTTP ~~cookies~~ cookie, and
the regular-expression pattern matching circuit is implemented by a technique
selected from the group consisting of hardware, software, and a combination thereof, and
a logic circuit connected to the FIFO buffer, the logic circuit adapted to provide a
response message to the client device based on ~~[[a]]~~ content of the recognized HTTP message
~~headers~~ header.

14. – 18. (Cancelled)

1 19. (Currently Amended) A communications network comprising:
2 a client device; and
3 a server connected to the client device for providing services to the client device, the
4 server including:
5 a central processing unit (CPU),
6 a bus connected to the CPU,
7 a memory connected to the bus, the memory having a server application program
8 stored therein, and
9 a network interface for processing ~~an incoming messages~~ message by the client
10 device to the server, the network interface including:
11 a First-In-First-Out (FIFO) buffer adapted to receive the incoming
12 ~~messages~~ message and to assemble the incoming ~~messages~~ message from a serial to a parallel
13 form,
14 a regular-expression pattern matching circuit connected to the FIFO
15 buffer, the regular-expression pattern matching circuit adapted to, concurrent with the assembly
16 of the incoming ~~messages~~ message from a serial to a parallel form, recognize a Hypertext
17 Transfer Protocol (HTTP) message ~~headers~~ header embedded in the incoming ~~messages~~
18 message, parse the recognized HTTP message ~~headers~~ header into a parsed HTTP message
19 ~~headers~~ header, provide the parsed HTTP message ~~headers~~ header in a compact form to the CPU
20 and the memory, and provide to the CPU and the memory ~~any incoming messages~~ message that
21 cannot be recognized by the regular-expression pattern matching circuit, wherein:
22 the HTTP message ~~headers include~~ header includes an HTTP ~~cookies~~ cookie, and
23 the regular-expression pattern matching circuit is implemented by a technique
24 selected from the group consisting of hardware, software, and a combination thereof, and
25 a logic circuit connected to the FIFO buffer, the logic circuit adapted to provide a
26 response message to the client device based on a content of the recognized HTTP message
27 ~~headers~~ header.

20. (Currently Amended) A method for processing an incoming message sent by a client device to a server, comprising:

- receiving the incoming message using a First-In-First-Out (FIFO) buffer;
- assembling the incoming message from a serial to a parallel form using the FIFO buffer;
- and
- concurrent with the assembling of the incoming message from a serial to a parallel form:
 - recognizing a Hypertext Transfer Protocol (HTTP) message header embedded in the incoming message received by the FIFO buffer using a regular-expression pattern matching circuit,
 - parsing the recognized HTTP message header into a parsed HTTP message header using the regular-expression pattern matching circuit, [[and]] wherein the HTTP message header includes a HTTP cookie;
 - providing the parsed HTTP message header in a compact form to a CPU and a memory in the server;
 - providing a response message to the client device based on a content of the recognized HTTP message header;
 - providing to the server any incoming message that cannot be recognized by the regular-expression pattern matching circuit.

21. – 25. (Cancelled)